

Appl. No.: 10/812,048  
Amdt. dated 11/15/2005  
Reply to Office action of July 19, 2005

### REMARKS

Claim 15 has been amended to recite that the reactor vessel includes an alkali hydroxide stream, contaminated alkali halide stream, and a chlorine gas stream that react to produce a stream of treated alkali halide. New Claim 19 recites that the reactor vessel includes a stream of depleted alkali chloride. New Claim 20 recites that the stream of depleted alkali chloride comprises recycled potassium hydroxide. New Claim 21 recites that a stream of depleted alkali chloride is introduced into the stream of contaminated alkali halide stream prior to being introduced into the vessel. New Claims 22 and 23 recite compositions for the alkali hydroxide stream and the contaminated alkali halide stream. New Claim 24 recites that the stream of treated alkali halide includes substantially no hydrogen peroxide or potassium hydroxide. New Claim 25 recites that a stream of gaseous oxygen is produced from the reaction of the stream of chlorine gas with the streams of alkali hydroxide stream and contaminated alkali halide stream, and that the vessel further comprises an outlet through which said oxygen gas is escapable from the vessel. New Claim 26 recites that the reaction vessel comprises a column reactor, a stirred reactor, or a falling film reactor. New Claim 27 has been added. Claim 27 recites a reactor vessel having an alkali hydroxide inlet; a contaminated alkali halide inlet; and a chlorine gas inlet, wherein a stream of chlorine gas flows counter-current to, and reacts with an alkali hydroxide stream and a contaminated alkali halide stream to produce a stream of treated alkali halide. Amendments to Claim 15 and new Claims 19 – 27 are supported by the specification and do not raise new issues.

### *Specification*

The Examiner has objected to the specification and has requested that the “CROSS REFERENCE TO RELATED APPLICATION” be updated to include the recitation that U.S. Patent Application No. 10/151,653, filed on May 20, 2002, is “now U.S. Patent No. 6,763,051.” The specification has been amended to overcome the Examiner’s objection.

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*Claim Rejections under 35 USC § 102*

Claims 15 and 16 have been rejected under 35 U.S.C. § 102(b) as being anticipated by several references. Specifically, Claims 15 and 16 have been rejected as being anticipated by U.S. Patent No. 4,062,654 to Shigeyasu et al. and JP Abstract JP 63-245979 to Fujii et al. Claim 15 has also been rejected as being anticipated by EP 0094718 to Lohrberg et al., U.S. Patent No. 3,743,707 to Iwase et al., and U.S. Patent No. 4,246,252 to McDermott et al.

The Examiner alleges that the cited references disclose various reaction vessels having various inlets and outlets disposed in upper and lower regions of the reaction vessel. However, none of the cited references disclose or suggest a reaction vessel having a stream of chlorine gas that is introduced into a lower region of the vessel in a direction that is counter-current to a stream of alkali hydroxide and a stream of contaminated alkali halide so that a stream of treated alkali halide is produced through the reaction of the streams. Accordingly, Claim 15 and any claims dependent thereon are patentable over the cited references.

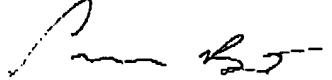
It is respectfully submitted that all pending claims 15, 16, and 19 - 26 are now in condition for immediate allowance and an early notification of the allowability of these claims is earnestly solicited. If any matters remain to be resolved, the Examiner is urged to contact the undersigned attorney by telephone at 704-444-1185 to expedite prosecution of this application.

It is not believed that extensions of time or fees for net addition of claims are required, beyond those that may otherwise be provided for in documents accompanying this paper. However, in the event that additional extensions of time are necessary to allow consideration of this paper, such extensions are hereby petitioned under 37 CFR § 1.136(a), and any fee required

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therefore (including fees for net addition of claims) is hereby authorized to be charged to Deposit Account No. 16-0605.

Respectfully submitted,

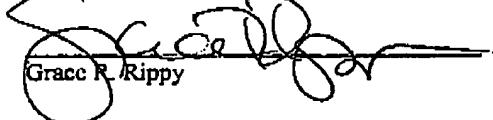


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**CERTIFICATION OF FACSIMILE TRANSMISSION**

I hereby certify that this paper is being facsimile transmitted to the US Patent and Trademark Office at Fax No. (571) 273-8300 on the date shown below.



Grace R. Rippy

November 15, 2005

Date